Amendments to the Claims:

The listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently amended) A medical device **comprising a coating, wherein the coating comprises** [~~coated with~~] a therapeutically effective amount of [~~at least~~] one [~~type~~] **or more antibodies and one or more layers of a matrix, and wherein the one or more antibodies is selected from the group consisting of antibodies, fragments thereof and combinations of the antibodies and fragments** [~~of antibody~~] which **react** [~~reacts~~] with an endothelial cell surface antigen [~~and at least one layer of a matrix, wherein the matrix comprises a fullerene ranging from about C60 to about C100~~].

2. (Currently amended) The medical device of claim 1, wherein the **matrix is layered onto the surface of the medical device and the one or more antibodies** [~~antibody~~] is tethered covalently by a linker molecule to the **matrix** [~~at least one~~] layer [~~of the matrix coating the medical device~~].

3. (Cancelled)

4. (Original) The medical device of claim 1, wherein the antibody is a monoclonal antibody.

5. (Original) The medical device of claim 1, wherein the medical device is a stent.

6. (Withdrawn) The medical device of claim 1, wherein the medical device is a synthetic graft.

7. (Original) The medical device of claim 1, wherein the endothelial cell is a human cell.

8. (Original) The medical device of claim 4, wherein the monoclonal antibody reacts with endothelial cell surface antigen CD34.

9. (Original) The medical device of claim 4 or 8, wherein the monoclonal antibody comprises Fab or $F(ab')_2$ fragments.

10. (Withdrawn) A medical device coated with a therapeutically effective amount of at least one type of antibody which reacts with an endothelial cell antigen and at least one layer of a matrix, wherein the matrix comprises polyurethane, segmented polyurethane-urea/heparin, poly-L-lactic acid, cellulose ester, polyethylene glycol, collagen, laminin, heparin, fibrin, cellulose or carbon.

11. (Withdrawn) The medical device of claim 10, wherein the antibody is tethered covalently by a linker molecule to the last layer of the matrix coating the medical device.

12. (Withdrawn) The medical device of claim 10, wherein the antibody is a monoclonal antibody.

13. (Withdrawn) The medical device of claim 10, wherein the medical device is a stent.

14. (Withdrawn) The medical device of claim 10, wherein the medical device is a synthetic graft.

15. (Withdrawn) The medical device of claim 10, wherein the endothelial cell is a human cell.

16. (Withdrawn) The medical device of claim 12, wherein the monoclonal antibody reacts with endothelial cell surface antigen, CD34.

17. (Withdrawn) The medical device of claim 12 or 16, wherein the monoclonal antibody comprises Fab or $F(ab')_2$ fragments.

18. (Currently amended) A **coating** composition for **rendering** [~~coating~~] a medical device **compatible for *in vivo* attachment and proliferation of cells on the surface thereof**, wherein the **coating** composition comprises a matrix and a therapeutically effective amount of **one or more antibodies, and wherein the one or more antibodies is selected from the group consisting of antibodies, fragments thereof and combinations of the antibodies and fragments which react** [~~at least one type of antibody that reacts~~] with an endothelial cell surface antigen.

19. (Withdrawn) The composition of claim 18, wherein the matrix comprises polyurethane, segmented polyurethane-urea/heparin, poly-L-lactic acid, cellulose ester, polyethylene glycol, collagen, laminin, heparin, fibrin, cellulose or carbon.

20. (Currently amended) The **coating** composition of claim 18, wherein the matrix comprises a **material selected from the group consisting of** a fullerene [~~ranging from about C60 to about C100~~], **polyurethane, segmented polyurethane-urea/heparin, poly-L-lactic acid, cellulose ester, polyethylene glycol, collagen, laminin, heparin, fibrin, cellulose, carbon, polytetrafluoroethylene, expanded polytetrafluoroethylene and mixtures thereof**.

21. (Currently amended) The **coating** composition of claim **18** [~~20~~], wherein the antibody is a monoclonal antibody.

22. (Currently amended) The **coating** composition of claim **18** [~~21~~], wherein the endothelial cell is a human cell.

23. (Currently amended) The **coating** composition of claim 21, wherein the monoclonal antibody reacts with endothelial cell surface antigen, CD34.

24. (Currently amended) The **coating** composition of claim **21 or 23** [~~22~~], wherein the monoclonal antibody comprises Fab or $F(ab')_2$ fragments.

25. (Currently amended) A method for **rendering** [~~coating~~] a medical device **compatible for *in vivo* attachment and proliferation of cells on the surface thereof,** comprising the steps of:

(a) coating **the** [**a**] medical device with [~~at least~~] one **or more layers** [~~layer~~] of a matrix [~~comprising polyurethane, segmented polyurethane-urea/heparin, poly-L-lactic acid, cellulose ester, polyethylene glycol, collagen, laminin, heparin, fibrin, cellulose, fullerene or carbon~~]; and

(b) adding **to the matrix layer** a therapeutically effective amount of [~~at least~~] one **or more antibodies, wherein the one or more antibodies is selected from the group consisting of antibodies, fragments thereof and combinations of the antibodies and fragments which react** [~~type of antibody which reacts~~] with an endothelial cell surface antigen [~~to the matrix coating the medical device~~].

26. (Withdrawn) The method of claim 25, wherein the antibody is noncovalently coated on the last layer of the matrix coating the medical device.

27. (Currently amended) The method of claim 25, wherein the antibody is tethered covalently by a linker molecule to the **matrix** [~~at least one~~] layer [~~of the matrix~~] coating the medical device.

28. (Canceled)

29. (Currently amended) A method of treating **a mammal** [~~mammals~~] for atherosclerosis comprising inserting [~~insertion of~~] a medical device into an artery **of the mammal**, wherein the medical device **comprises a coating, wherein the coating comprises** [~~is coated with~~] a therapeutically effective amount of **one or more antibodies and** [~~at least~~] one **or more layers of** [~~type of antibody which reacts with an endothelial cell surface antigen and~~] a matrix, **and wherein the one or more antibodies is selected from the group consisting of antibodies, fragments thereof and combinations of the antibodies and fragments which react with an endothelial cell surface antigen** [~~comprising a fullerene ranging from about C60 to C100~~].

30. (Original) The method of treatment of claim 29, wherein the antibody is a monoclonal antibody.

31. (Original) The method of treatment of claim 29, wherein the atherosclerosis is coronary artery atherosclerosis.

32. (Original) The method of treatment of claim 30, wherein the monoclonal antibody comprises Fab or $F(ab')_2$ fragments.

33. (Withdrawn) A method for treating mammals for atherosclerosis comprising insertion into an artery of a medical device, wherein the medical device is coated with at least one layer of a matrix comprising polyurethane, segmented polyurethane-urea/heparin, poly-L-lactic acid, cellulose ester, polyethylene glycol, collagen, laminin, heparin, fibrin, cellulose or carbon and a therapeutically effective amount of at least one type of antibody which reacts with an endothelial cell antigen.

34. (Withdrawn) The method of treatment of claim 33, wherein the antibody is a monoclonal antibody.

35. (Withdrawn) The method of treatment of claim 34, wherein the monoclonal antibody comprises Fab or $F(ab')_2$ fragments.

36. (Withdrawn) A method for treating mammals for obstruction of a vessel comprising insertion into a vessel of a medical device coated with at least one layer of a matrix comprising polyurethane, segmented polyurethane-urea/heparin, poly-L-lactic acid, cellulose ester, polyethylene glycol, collagen, laminin, heparin, fibrin, cellulose or carbon and a therapeutically effective amount of at least one type of antibody which reacts with an endothelial cell antigen.

37. (Withdrawn) The method of treatment of claim 36, wherein the antibody is a monoclonal antibody.

38. (Currently amended) A method for treating **a mammal** [~~mammals~~] for obstruction of a vessel comprising inserting a medical device into a vessel **of the mammal**, wherein the [a] medical device **comprises a coating, wherein the coating comprises one or more antibodies and** [~~is coated with at least~~] one **or more layers** [layer] of a matrix**, and wherein the one or more antibodies is selected from the group consisting of antibodies, fragments thereof and combinations of the antibodies and fragments** [~~comprising a fullerene ranging from about C60 to C100 and a therapeutically effective amount of at least one type of antibody~~] which react [~~reacts~~] with an endothelial cell surface antigen.

39. (Previously presented) The method of treatment of claim 38, wherein the vessel is an artery.

40. (Withdrawn) The method of treatment of claim 36 or 38, wherein the vessel is a vein.

41. (Currently amended) A medical device **comprising** [~~coated with at least~~] one **or more layers** [~~layer~~] of a matrix [~~comprising a C60O fullerene~~], wherein the [~~at least one~~] **matrix** layer [~~of the matrix~~] is covalently attached to the medical device **and the matrix comprises a C60O fullerene**.

42. (Withdrawn) The medical device of claim 41, wherein the first layer of the matrix is noncovalently attached to the medical device.

43. (Cancelled)

44. (Cancelled)

45. (Original) The medical device of claim 41, wherein the medical device is a stent.

46. (Withdrawn) The medical device of claim 41, wherein the medical device is a synthetic graft.

47. (Cancelled)

48. (Withdrawn) The medical device of claim 47, wherein the matrix is noncovalently attached to the medical device.

49. (Cancelled)

50. (Cancelled)

51. (Withdrawn) The medical device of claim 47, wherein the medical device is a synthetic graft.

52. (Withdrawn) A medical device coated with a therapeutically effective amount of at least one type of antibody which reacts with an endothelial cell antigen and at least one layer of a matrix, wherein the matrix comprises a naturally occurring material.

53. (Withdrawn) A medical device coated with a therapeutically effective amount of at least one type of antibody which reacts with an endothelial cell antigen and at least one layer of a matrix, wherein the matrix comprises a synthetic material.

54. (Withdrawn) A medical device coated with a therapeutically effective amount of at least one type of antibody which reacts with an endothelial cell antigen and at least one layer of a matrix, wherein the matrix comprises polytetrafluoroethylene.

55. (Withdrawn) A medical device coated with a therapeutically effective amount of at least one type of antibody which reacts with an endothelial cell antigen and at least one layer of a matrix, wherein the matrix comprises expanded polytetrafluoroethylene .

Claim 56-61 (cancelled)

62. (New) The medical device according to claim 1, wherein the matrix comprises a naturally occurring material or a synthetic material.

63. (New) The medical device according to claim 1, wherein the matrix comprises a material selected from the group consisting of a fullerene, polyurethane, segmented polyurethane-urea/heparin, poly-L-lactic acid, cellulose ester, polyethylene glycol, collagen, laminin, heparin, fibrin, cellulose, carbon, polytetrafluoroethylene, expanded polytetrafluoroethylene and mixtures thereof.

64. (New) The medical device according to claim 63, wherein the fullerene ranges from about C60 to about C100.

65. (New) The medical device according to claim 63, wherein the fullerene is C60O.

66. (New) The coating composition according to claim 18, wherein the matrix comprises a naturally occurring material or a synthetic material.

67. (New) The coating composition according to claim 20, wherein the fullerene ranges from about C60 to about C100.

68. (New) The coating composition according to claim 20, wherein the fullerene is C60O.

69. (New) The method according to claim 25, wherein the matrix comprises a naturally occurring material or a synthetic material.

70. (New) The method according to claim 25, wherein the matrix comprises a material selected from the group consisting of a fullerene, polyurethane, segmented polyurethane-urea/heparin, poly-L-lactic acid, cellulose ester, polyethylene glycol, collagen, laminin, heparin, fibrin, cellulose, carbon, polytetrafluoroethylene, expanded polytetrafluoroethylene and mixtures thereof.

71. (New) The method according to claim 70, wherein the fullerene ranges from about C60 to about C100.

72. (New) The method according to claim 70, wherein the fullerene is C60O.

73. (New) The method according to claim 29 or 38, wherein the matrix comprises a naturally occurring material or a synthetic material.

74. (New) The method according to claim 29 or 38, wherein the matrix comprises a material selected from the group consisting of a fullerene, polyurethane, segmented polyurethane-urea/heparin, poly-L-lactic acid, cellulose ester, polyethylene glycol, collagen, laminin, heparin, fibrin, cellulose, carbon, polytetrafluoroethylene, expanded polytetrafluoroethylene and mixtures thereof.

75. (New) The method according to claim 74, wherein the fullerene ranges from about C60 to about C100.

76. (New) The method according to claim 74, wherein the fullerene is C60O.